5

10

ijŌ

<u>.</u>±

<u>.</u> ± 15

1. A method of verifying a financial transaction comprising:

receiving via a digital wheless network a merchant financial verification request in a first format;

identifying that the request is in the first format;

converting the request to a second format; and

after converting, analyzing the request to determine whether to transmit an authorization message.

2. The method of claim 1 including generating an authorization message in the second format, and converting the message to the first format for transmission via the network.

3. The method of claim 1 including a user engaging in the steps of:

inputting transaction information to an input device,

converting the information to a signal in the second format,

converting the signal in the second format to a signal in the first format, and

transmitting the signal to the network.

4. The method of claim 3 including the user converting a reply signal from the network from the first format to the second format, and from the second format to a text format.

5. The method of claim 1 including the steps of:

providing a wireless remote communication apparatus ("RCA") having a vocoder for transmitting and receiving human voice content over a voice channel of the digital wireless communication network;

providing a call receiver apparatus ("CRA") also capable of transmitting and receiving human voice content over a voice channel of the digital wireless communication network; defining one or more control codes reserved for communication control signaling over

25

20

15

20

5

10

the voice channel, each control code comprising one or more alpha-numeric characters; establishing a digital voice channel connection between the RCA and the call receiver apparatus CRA;

in a first one of the RCA and the CRA, selecting one of the communication control codes for transmission to the other one of the RCA and the CRA;

in the first one of the RCA and the CRA, converting the selected control code into an audio tone representation;

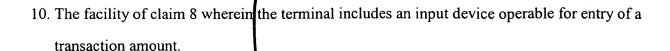
in the first one of the RCA and the CRA, formatting the audio tones in a vocoder so as to form digital transmission data;

in the first one of the RCA and the CRA, transmitting the digital transmission data over the digital voice channel connection to the other one of the RCA and the CRA; and in the other one of the RCA and the CRA, detecting the control code to effect control signaling transparently over the voice channel..

- 6. The method of claim 1 including determining whether an incoming request is in the first format or a different format.
- 7. The method of claim 1 wherein the merchant financial verification request includes information about a credit card transaction.
- 8. A wireless financial transaction verification facility comprising:
 - a transaction information terminal operable to communicate information in a first format;
 - a converter connected to the recording device and operable to convert information between the first format and a second format;
 - a wireless communication device connected to the converter and to a digital cellular network, and operable to communicate with the network in the second format.
- 9. The facility of claim 8 wherein the terminal includes a card scanner.

AIR-3 -8-

25



- 11. The facility of claim 8 wherein the terminal includes a display for displaying a received approval status message.
- 12. The facility of claim 8 wherein the converter is a remote communications apparatus for voice and data communication exclusively over the audio traffic channel of a digital wireless telecommunication network comprising:

a source for generating digital data;

a tone generation module for encoding the digital data into a series of audio frequency tones; the audio fragment tones being selected so as to avoid frequencies that are characteristic of human voice thereby minimizing interference with simultaneous voice traffic on the channel;

a voice/data signal encoder/decoder (vocoder) for sampling the audio frequency tones and forming digital signals for transmission over the digital wireless telecommunication network; and

a transmission system for transmitting the digital signals over the audio traffic channel of the digital wireless telecommunication network.

- 13. The facility of claim 8 wherein the wireless communication device is a digital cellular telephone.
- 20 14. A telecommunications system for financial transaction verification comprising:
 - a digital cellular network;
 - a financial verification facility having a central converter connected to the network, and operable to convert an incoming signal from a first format to a second format; and the facility having a central processor operable to read the signal in the second format

and to make a financial determination about transaction information contained in the signal.

AIR-3 -9-



- 15. The system of claim 14 wherein the processor is operable to generate a transaction approval indication response in the second format.
- 16. The system of claim 14 wherein the central converter is operable to convert an outgoing signal from the second format to the first format.
- operable to convert financial transaction information to a signal in the second format, a user converter connected to the user terminal and operable to convert the signal to the first format, and a cellular device connected to the user converter and the network, and operable to communicate the signal in the first format to the call center.
 - 18. The system of claim 18 wherein the user converter and the central converter are operably equivalent.
 - 19. The system of claim 14 wherein the user converter is a remote communications apparatus for voice and data communication exclusively over the audio traffic channel of a digital wireless telecommunication network comprising:

a source for generating digital data;

a tone generation module for encoding the digital data into a series of audio frequency tones; the audio fragment tones being selected so as to avoid frequencies that are characteristic of human voice thereby minimizing interference with simultaneous voice traffic on the channel;

a voice/data signal encoder/decoder (vocoder) for sampling the audio frequency tones and forming digital signals for transmission over the digital wireless telecommunication network; and

a transmission system for transmitting the digital signals over the audio traffic channel of the digital wireless telecommunication network.

25

20